ABSTRACT

An assembly for a chemical-mechanical polishing process includes a platen having an outer edge, a top surface, and at least one inlet for introducing fluid to the top surface; a manifold system, entrenched in the top surface and in communication with the at least one inlet, for channeling the fluid about the top surface; a polishing pad having a top pad surface, and a plurality of fluid delivery through-holes for introducing the fluid from the manifold system to the top pad surface; and a fluid distribution system, entrenched in the top pad surface and in communication with the through-holes, for substantially uniformly distributing the fluid about the top pad surface. The fluid distribution system includes a set of intersecting first grooves defining an array of lands, each of the first grooves having a first cross sectional area. The fluid distribution system also includes a plurality of second grooves disposed within each of the lands and communicating with the first grooves, each of the second grooves having a second cross sectional area that is smaller than the first cross sectional area.